



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/852,855	05/10/2001	Raymond A. Berard	14060/198355(IRC289)	5678

23370 7590 12/31/2003

JOHN S. PRATT, ESQ  
KILPATRICK STOCKTON, LLP  
1100 PEACHTREE STREET  
SUITE 2800  
ATLANTA, GA 30309

EXAMINER
----------

WYROZEBSKI LEE, KATARZYNA I

ART UNIT	PAPER NUMBER
----------	--------------

1714

DATE MAILED: 12/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

2

<b>Advisory Action</b>	<b>Application No.</b> 09/852,855	<b>Applicant(s)</b> BERARD, RAYMOND A.	
	<b>Examiner</b> Katarzyna Wyrozebski Lee	<b>Art Unit</b> 1714	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 05 December 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY [check either a) or b)]**

- a) ☒ The period for reply expires 6 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

- 1. ☒ A Notice of Appeal was filed on 05 December 2003. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
- 2. ☒ The proposed amendment(s) will not be entered because:
  - (a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: see attachment to the advisory.

- 3. ☐ Applicant's reply has overcome the following rejection(s): BOOIJ.
- 4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
- 5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attachment to the advisory.
- 6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
- 7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: none.  
 Claim(s) objected to: none.  
 Claim(s) rejected: 1-16.  
 Claim(s) withdrawn from consideration: none.

- 8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
- 9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.
- 10. ☐ Other: \_\_\_\_\_

Katarzyna Wyrozebski Lee  
 Primary Examiner  
 Art Unit: 1714

*Attachment to the Advisory*

In view of the applicant's Amendment – After – Final mailed on December 5, 2003 following Advisory Action is issued.

The amendment as submitted on 12/5/2003 is not entered since newly added claim 17 is a duplicate of claim 10. Duplicate claims are objected to therefore the amendment would contain new considerations. The amendment can be entered if application choose to cancel claim 10.

The rejections over the prior art of record are not over come and are incorporated here by reference.

The examiner acknowledges filed Notice of Appeal on December 5, 2003.

a) In the amendment filed on December 5, 2003 the applicants argued the examiner's understanding of the elevated pressure, temperature and equilibrium pressure.

With respect to the above argument, examiner's knowledge is based on facts taught by the prior art of record. So far Applicant's independent claims only require that:

contacting the nylon-containing material with an alkanol-containing solvent at elevated temperature and at a pressure higher than the equilibrium pressure of the alkanol-containing solvent at the elevated temperature, thereby dissolving the nylon in the alkanol-containing solvent;

Further claims and the specification define these pressures and temperatures as:

9. (Originally presented) The method of claim 1, wherein the pressure during the contacting ranges from about 250 psig to about 600 psig.

10. (Originally presented) The method of claim 1, wherein the elevated temperature ranges from about 130 °C to about 155 °C.

Art Unit: 1714

The fact remains that the prior art of YANG (US 6,036,726) in the examples discloses 3 different temperatures and pressures at which the solution containing waste nylon is treated and these temperatures and pressures are:

solution to temperature lower than 140°C. In specific examples, the dissolution temperatures were 140°C, 160°C and 180°C (col. 13) at a pressure of 250 psig.

The prior art of YANG may not have to use the fancy wording such as equilibrium pressure, but if the solvents are the same (mainly methanol, ethanol or propanol), the temperature of 140°C and pressure of 250 psig are also disclosed recycling nylon containing polymer waste, the conditions higher than that of equilibrium pressure is bound to be met.

b) The prior art of YANG does not teach source of pressure external to the vapor-liquid equilibrium of the solvent.

With respect to the above argument, present claims do not require such condition. The claims of the present invention require that the alkanol solvent be at elevated temperature and pressure higher than the equilibrium pressure of the solvent.

c) The prior art of YANG does not disclose use of inert gas to increase the pressure.

With respect to the above argument, applicant's independent claims do not require that either. Claim 12, which does require inert gas was rejected by combination of with the prior art of STOTT and it has been justified that use of inert gas afford non-oxidizing conditions during depolymerization. This combination will be further addressed later in this response.

Art Unit: 1714

d) The prior art of YANG does not teach that the pressure used in their process should be above the equilibrium pressure of the solvent at the contacting temperature.

The pressure in YANG is 250 and it is the pressure cited by the present claims. How can YANG not teach it then? He may not say it, but it is there numerically. Combination of the temperature and pressure together would result in the same conditions as claimed in the present invention.

e) The applicant's indicate that the examiner has not fully appreciated the distinction between the present invention and the prior art of YANG.

Well, till this moment it does not seem that there is a distinction.

f) The examiner is not correct in asserting that the pressure of 250 psig and temperature of 140°C would dissolve the nylon.

It worked for YANG

g) The examiner is picking and choosing and randomly combining the temperatures taught in YANG.

Picking and choosing argument in the way applicants described is used when examiner picks from a "laundry list" of temperatures and pressures disclosed in the prior art. In YANG, only one pressure is disclosed, the 250 psig and examples are limited to three temperatures. This is hardly picking and choosing.

Art Unit: 1714

h) The applicant's question whether pressure of 250 psig can be considered elevated with respect to the atmospheric pressure and whether it establishes anticipation.

Well, the applicants think that it can be considered elevated since it is part of the limitation of claim 9. If it were not then why would the applicant's claim such pressure as elevated?

With respect to the anticipation aspect of the argument, the pressure of 250 psig is used in examiner's rejection, because it is pressure taught by the prior art of YANG.

i) Both examiner and YANG appear to admit the pressure will vary with the solvents.

First of all, the examiner did not admit to anything and everything that was stated in the office action should be taken in its face value. The note that the vapor pressures are specific to the solvents is a chemical property that is inherent to the solvents and not examiner's allegation. The fact remains that the solvent of YANG are the same solvents as those in claim 5 of the present invention and so are the elevated temperatures.

j) The applicant does not argue that the pressure of YANG has to be lower than the vapor pressure to process the nylon of the prior art.

The prior art of YANG still discloses 250 psig and according to the claim 9 of the present invention it is a pressure higher than the equilibrium pressure.

Obviousness rejections:

For Rejection over YANG in view of MEYER:

Art Unit: 1714

k) Meyer fails to cure deficiencies of YANG as it does not teach operating pressures above the equilibrium of the vapor pressure of the solvent at the dissolution temperature.

With respect to the above differences, the prior art of MEYER was utilized to disclose narrower temperature range, otherwise taught or made obvious by the prior art of YANG alone. These temperatures are simply more specific.

l) The prior art of YANG and MEYER are so different it would not have been obvious to combine the disclosures. Skilled worker would not be motivated to utilize the process of YANG in disclosure of MEYER.

The prior art of YANG and MEYER may not both disclose recycling waste of nylon but they both address the issue that one of ordinary skill in the art has to know, and which is a dissolution temperature of the nylon compound. In addition the prior art of YANG recovers nylon *via* precipitation. The prior art of MEYER also produced polyamide powder by precipitation. These two disclosures have more in common than the applicants admit. The *prima facie* case exists since the temperatures of MEYER would also afford dissolution of polyamide as they do in YANG.

With respect to the motivation of utilizing process of YANG in MEYER, that is not what rejection teaches. The rejection is YANG in view of MEYER, which means utilizing temperatures of MEYER in YANG. The applicants have misconstrued the rejection.

m) The applicants stated that the prior art of record would degrade the fibers of polyamide (page 9 of the response).

Art Unit: 1714

With respect to the above argument, the examiner was unable to find anywhere in the disclosure of YANG that the polyamide recovered by his process would be degraded in any form. The examiner requests that the applicants provide the column and paragraph in the prior art of YANG that would teach degradation of the polymer.

n) Allowing process to occur at lower temperatures results in degradation of nylon. There is no indication that utilizing lower temperatures would function effectively to dissolve nylon.

With respect to the above argument, there are no temperatures below 138°C listed in either prior art disclosure. The example of prior art of YANG teaches 140°C and the prior art of MEYER teaches 138-142°C, wherein 142°C is actually slightly higher than 140°C of YANG. In addition, the temperature of 140°C lies squarely in the middle of the range of 130-155°C of the present invention. Therefore there should not be degradation.

Therefore the temperatures taught by prior art of MEYER are within the same range and not lower as the temperatures of YANG. To further elaborate on applicant's arguments, if nylon was dissolved at 140°C in YANG it will be dissolved at 142°C as well, in fact both disclosures teach dissolution at these temperatures.

Pressures discussed by the applicants were not an issue of this rejection.

o) The applicant's argue further that the prior art of YANG and MEYER are not properly combinable for any reason because there is no teaching or motivation that the temperatures of MEYER would produce acceptable results in YANG.



Art Unit: 1714

With respect to the above argument the examiner disagrees. As indicated in the response to the argument o), the temperature at which the polyamide of YANG was dissolved is 140°C and which is slightly below of the temperature taught by MEYER (142°C). If temperature of 140°C dissolved polyamide of YANG, so would temperature of 142°C. Therefore the examiner does have is a *prima facie* case before the applicants.

p) The prior art of MEYER teaches the polyamide having 10 carbon atoms.

With respect to the above disclosure, the definition of polyamide in the prior art of YANG encompasses nylon-6,10 as well.

Rejection of YANG and BOOIJ.

With respect to the above rejection, such was utilized for the same purpose as the prior art of MEYER, which is to teach more narrower temperature range that would dissolve polyamide. Although the applicant's argued that the prior art of BOOIJ does not teach the pressure, which was not the idea for this rejection, the examiner of record agrees that the prior art of BOOIJ does not add anything to the disclosure of YANG. Therefore the rejection of YANG in view of BOOIJ is withdrawn.

Rejection of YANG in view of STOTT.

q) The examiner has dismissed each argument using rational that "they are not disclosed in the claims so they do not matter"

Art Unit: 1714

With respect to the above argument the examiner has never stated in any of the office action that the applicants arguments do not matter. The examiner of record has examined the claims as they were. They probably do matter since the applicants took time to discuss them, however they are not required by the claims. If there is something in the present invention that really distinguishes over the prior art of YANG it should be in the claims, since it would make the present invention unique. The presence of inert gas as recited in claims 12 and 13 surely would remove 102 rejection since the prior art of YANG does not teach inert gas or it does not mention it. The obviousness that one would want to use inert gas in the composition of YANG is established as inert gas would remove oxidizing atmosphere during the process and it would do so in the YANG as well as in STOTT.

r) The differences and advantages over the prior art of YANG should be considered by the examiner.

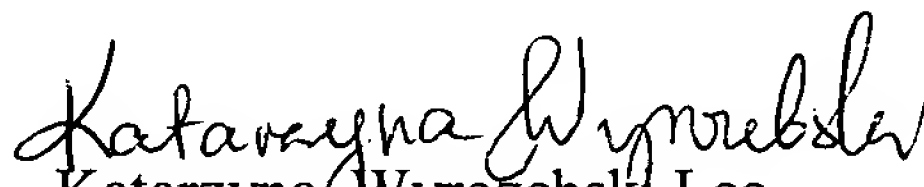
They were. I guess in addition to the statement that prior art of record would not teach the present invention and that it would not have been obvious to combine the prior art the examiner was looking for the "WHY". For example, the prior art of STOTT was utilized to provide for inert gas. Why it would not have been obvious to use inert gas in YANG?

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katarzyna Wyrozebski Lee whose telephone number is (571) 272-1127. The examiner can normally be reached on Mon-Thurs 6:30 AM-4:00 PM.

Art Unit: 1714

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

  
Katarzyna Wyrozebski Lee  
Primary Examiner  
Art Unit 1714

December 29, 2003